

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3-4 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter. The subject matter in the claims is “a computer program”. A computer program per se, when not tied to any particular hardware or stored on a medium, is not considered one of the patentable subject matters under 35 U.S.C 101. See MPEP 2106.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krapf et al. (US 6901588) hereinafter Krapf, in view of Breternitz (US 6044220), in further view of Barsness et al. (US 7086046) hereinafter Barsness.

With respect to claim 1, Krapf teaches “**where at least one pair of a first instruction pattern information element representing an instruction pattern in an**

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old source program and a second instruction pattern information element representing an instruction pattern in a new source program is stored in a memory part, a new program output step of outputting, using an output means, a new source program resulting from said old source program having been converted in said instruction pattern conversion step; and an input receiving step of receiving input, manually entered by a user using an input means, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed" (Krapf teaches a program conversion method, where user analyzes a source program then manually converts the source program executable in one environment to a new source program executable in other environment, (column 1, line 45-55), an expression in the old source program and its corresponding expression in the new source program are one pair of instruction pattern information).

Krapf does not teach **"an analysis step of analyzing, using an analysis means, a number of times that said first instruction pattern information element appears in said old source program; an instruction pattern conversion step of converting, using a conversion means, descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more"**. Breternitz teaches the above limitations

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(claims 1, 3, and 6; Breternitz teaches analyzing a source program, and determine the occurrence of each instruction in the source program, if the occurrence of an instruction exceeds certain threshold, then the instruction is translated automatically to a corresponding instruction executable in another environment). It would have been obvious at the time of the invention to a person of ordinary skill in art to combine Krapf with Breternitz to analyze a source program to determine occurrence of each instruction pattern, if the occurrence of the instruction pattern exceeds a threshold, it is translated automatically to a corresponding instruction pattern, if the occurrence of the instruction pattern is below the threshold, the instruction pattern is left to user to translate manually. Because automatic translation combined with manually translation is more efficient than manually translation alone (Krapf teaches manual translation is impractical for a program with millions of lines, (column 1, line 50-55)).

Krapf in view of Breternitz does not explicitly teach **“an analysis results output step of outputting, using an output means, analysis results obtained in said analysis step”**. Barsness teaches analyzing source program codes then display the result of analysis (Fig. 5, column 1, line 40-49). It would have been obvious at the time of the invention to a person of ordinary skill in art to combine Krapf and Breternitz with Barsness output the result from an analysis of program codes, so the user is more informed and understands better about the source program, thus makes the conversion process better.

With respect to claim 2, Krapf in views of Breternitz and Barsness teaches all the limitations of claim 1. Barsness further teaches “**wherein said new program output step outputs said descriptions, having been converted in said instruction pattern conversion step, visually distinct from unconverted descriptions, in said new source program**” (claim 1, converted source code is visually distinct from the unconverted source code in a display).

Claims 3-4 recite a computer program that performs the method of claims 1-2, thus claims 3-4 are rejected under the same rationale as claims 1-2.

Claims 5-6 recite a program conversion device that performs the method of claims 1-2, thus claims 5-6 are rejected under the same rationale as claims 1-2.

Claims 7-8 recite limitations already contained in claims 1-2, thus claims 7-8 are rejected under the same rationale as claims 1-2.

Claims 9-10 recite a program creation device that performs the method of claims 1-2, thus claims 9-10 are rejected under the same rationale as claims 1-2.

Conclusion

The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure. See PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HANG PAN whose telephone number is (571)270-7667. The examiner can normally be reached on Mon-Fri, 8:30 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. P./
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193